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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/099,898	03/15/2002	Vijay Kataria	DP-304987	5374
7590 11/19/2003				
JIMMY L. FUNKE DELPHI TECHNOLOGIES, INC. Legal Staff Mail Code CT10C P.O. Box 9005 Kokomo, IN 46904-9005				
EXAMINER VORTMAN, ANATOLY				
ART UNIT		PAPER NUMBER		
2835				

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary****Application No.**

10/099,898

**Applicant(s)**

KATARIA, VIJAY

**Examiner**

Anatoly Vortman

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-17 is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)  
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_. 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "heat rail" recited in claim 8 and "thermally conductive bracket" recited in claim 9 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-7 and 10, are rejected under 35 U.S.C. 102(b) as being anticipated by US/5,985,697 to Chaney et al., (Chaney).

Regarding claims 1, 2, and 7, Chaney disclosed (Fig. 3) an electronics assembly comprising: a heat generating electrical component (310); a heat sink / metal case (320)

positioned to define a gap between said heat generating component (310) and said heat sink (320); at least one cured thermal adhesive member (322) filling said gap. Regarding the limitations: "at least one pre-cured thermal adhesive member" and "at least one post-cured thermal adhesive member", please note that said limitations are directed to a method steps of production of the device and are not the limitations pertained to the final product. It is not important for the final structure when (timewise) said thermal adhesive members have been cured, since in the final product only the cured thermal adhesive is present in the gap. The method of forming the device is not germane to the issue of patentability of the device itself. Even though the claims are limited by and defined by the recited process, the determination of patentability of the product is based on the product itself, and does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). Therefore, these limitations have not been given patentable weight.

Alternatively, using the same approach, claim 1 is rejected as anticipated by Applicant's Admitted Prior Art (see p. 2 of the specification of the instant application, lines 1+).

Regarding claims 3-5, and 10 the claims recite various method steps of the production of the device (i.e. forming at least one pre-cured thermal adhesive member having dots of equal height and affixing it to the components of the device) and to the limitations of the device while in production (i.e. not to the final product).

Even though the claims are limited by and defined by the recited process, the determination of patentability of the product is based on the product itself, and does not depend

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on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985).

Regarding claim 6, Chaney disclosed a substrate (302) and a clamping mechanism (324, 328, 330).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaney ('697) in view of the Applicant's Admitted Prior Art (AAPA).

Chaney disclosed all of the claims limitations as apply to claim 1 above, but did not disclose that the heat rails and thermally conductive brackets may be used in place of the heat sink.

AAPA states that heat rails and thermally conductive brackets have been known in the cooling art at the time the invention was made (see p. 1 of the specification of the instant application, paragraph [0003], lines 3 and 4).

Therefore, it would have been obvious to a person of ordinary skill in the cooling art at the time the invention was made to substitute said heat sink (320) of Chaney with heat rails or

thermally conductive brackets as taught by AAPA in order to accommodate said device of Chaney for particular application.

***Allowable Subject Matter***

6. Claims 11-17 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter: claims 11-17 are allowed, because claim 11 recites: "curing said plurality of thermal adhesive members" and "curing said post-cure thermal adhesive".

The aforementioned limitations in combination with all remaining limitations of claim 11 are believed to render said claim 11 and all of the dependent claims 12-17 patentable over the art of record.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

US/5367193, 6069023, 6452278, 5561322, 5550406, 2003/0150604, 4698662, and 5026748 disclosed cooling arrangements for electronic components comprising thermally conductive adhesives.

Please note that US/5026748, 5550406, 6069023, and 5367193 would have been also sufficient for rejection under 35 USPC 102 of at least independent claim 1.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anatoly Vortman whose telephone number is 703-308-7824.

The examiner can normally be reached on Monday-Friday, between 9:30am and 6:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Darren Schuberg can be reached on 703-308-4815. The fax phone number for the organization where this application or proceeding is assigned is 703-305-3431.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.

A.V.



Anatoly Vortman  
Primary Examiner  
Art Unit 2835